

REMARKS

In response to the Office Action dated September 13, 2001, claims 1 and 13 have been amended. Therefore, claims 1-21 remain in the case. Reexamination and reconsideration of the application, as amended, are requested.

The Office Action rejected claims 1-4, 6-7 and 13-21 under 35 U.S.C. § 102(b) as being unpatentable over Ishii et al.

The Applicants respectfully traverse this rejection based on the amendments to the claims that more clearly defines the Applicants' invention and the arguments below.

With regard to claim 1, the Applicants' claimed invention, as amended, includes a printhead structure with multiple printing modes and a sufficient number of ink drop generators fluidically coupled to the ink supply device and formed in the printhead structure and arranged along at least three axes that are substantially parallel and spaced apart from each other to provide printing resolution of at least 600 dots per inch with each printing mode.

In addition, with regard to claim 13, the Applicants' claimed invention, as amended, includes a printhead structure having a one-pass print mode producing approximately 600 dots per inch at a first speed and 1200 dots per inch at a second speed higher than the first speed and a two-pass print mode producing approximately 600 dots per inch.

In contrast, Ishii et al. do not disclose all of the elements of the Applicant's claimed invention. According to the *MPEP*, "[A] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." [*emphasis added*] *MPEP* 2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Ishii et al. clearly do not disclose all of the elements of the Applicant's invention.

Specifically, Ishii et al. merely disclose a laminated type ink jet recording head for minimizing stagnation of air bubbles in its ink flow paths. Clearly, with regard to claim 1, Ishii et al. do not disclose the Applicants' printhead with multiple printing modes and a sufficient number of ink drop generators uniquely arranged on three axes to provide printing resolution of at least 600 dots per inch with each printing mode. Further, with regard to claim 13, Ishii et al. unquestionably do not disclose the Applicants' printhead structure having a one-pass print mode producing

approximately 600 dots per inch at a first speed and 1200 dots per inch at a second speed higher than the first speed and a two-pass print mode producing approximately 600 dots per inch.

Instead, Ishii et al. simply disclose an ink jet recording head with a board having a plurality of nozzle openings therein arranged in nozzle opening arrays formed in an auxiliary scanning direction. The nozzle opening arrays are divided into three groups at a predetermined interval in a main scanning direction. However, Ishii et al. do **not** disclose the Applicants' features as discussed above. Thus, since Ishii et al. do **not** disclose all of the elements of the claimed invention, the rejection under 35 U.S.C. 102 must be withdrawn because "[T]he identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Next, the Office Action rejected several dependent claims under 35 USC 103. In particular, the Office Action rejected claims 5, 8-10 under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. The Office Action also rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. in view of Udagawa et al. Last, the Office Action rejected claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. in view of Matsufuji et al.

The Applicants respectfully traverse these rejections. Namely, the cited references, in combination or alone, do **not** disclose, teach or suggest all of these features. In fact, the references are missing material limitations of the Applicants' claimed invention, **as discussed above**, and therefore cannot be used to render the invention obvious. In Re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Specifically, as discussed above, Ishii et al., as well as Udagawa et al. and Matsufuji et al., clearly do **not** disclose the Applicants' multiple printing modes and a sufficient number of ink drop generators uniquely arranged on three axes to provide printing resolution of at least 600 dots per inch with each printing mode of claim 1 and the Applicants' printhead structure having a one-pass print mode producing approximately 600 dots per inch at a first speed and 1200 dots per inch at a second speed higher than the first speed and a two-pass print mode producing approximately 600 dots per inch of claim 13. Hence, a prima facie case of obviousness **does not** exist because "some teaching, suggestion or incentive

supporting the combination" is not present. Consequently, the rejections must be withdrawn. ACS Hospital Systems, Inc. v. Montefiore Hospital. MPEP 2143.01

Further, since the dependent claims depend from respective independent claims, the dependent claims are patentable on the same basis as their respective independent claims.

Thus, in view of the arguments and amendments set forth above, the Applicants respectfully submit that the rejected claims are in immediate condition for allowance. The Examiner is therefore respectfully requested to withdraw the outstanding claim rejections and to pass this application to issue. Additionally, in an effort to expedite and further the prosecution of the subject application, the Applicants kindly invites the Examiner to telephone the Applicants' attorney at (818) 885-1575 if the Examiner has any questions or concerns. Please note that all correspondence should continue to be directed to:

Hewlett Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

Respectfully submitted,
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Edmond A. DeFrank
Reg. No. 37,814
Attorney for Applicants

VERSION WITH MARKINGS TO SHOW CHANGES MADE
IN THE CLAIMS

Below are marked-up versions of amended claims 1 and 13:

1. (Once Amended) An ink jet printing apparatus including an ink supply device containing ink [of a certain color], comprising:
a printhead structure having multiple printing modes; and
a [plurality] sufficient number of ink drop generators fluidically coupled to the ink supply device and formed in the printhead structure and arranged along at least three axes that are substantially parallel and spaced apart from each other to provide printing resolution of at least 600 dots per inch with each printing mode.

13. (Once Amended) A high-performance[, monochrome] ink jet printhead, comprising:
a printhead structure having a one-pass print mode producing approximately 600 dots per inch at a first speed and 1200 dots per inch at a second speed higher than the first speed and a two-pass print mode producing approximately 600 dots per inch;
a high-density array of ink drop generators disposed on the printhead structure, the array comprising:
a first plurality of ink drop generators arranged along a first axis to form a first axis group;
a second plurality of ink drop generators arranged along a second axis to form a second axis group and staggered with respect to the first axis group;
a third plurality of ink drop generators arranged along a third axis to form a third axis group and staggered with respect to the first and second axis groups; and
wherein the first, second and third axes are generally parallel to a reference axis and spaced transversely apart from one another.